

=====

Sequence Listing was accepted.

If you need help call the Patent Electronic Business Center at (866) 217-9197 (toll free).

Reviewer: markspencer

Timestamp: [year=2008; month=6; day=27; hr=9; min=33; sec=38; ms=218;]

=====

Application No: 10591395 Version No: 1.0

Input Set:

Output Set:

Started: 2008-06-26 15:18:50.834
Finished: 2008-06-26 15:18:58.308
Elapsed: 0 hr(s) 0 min(s) 7 sec(s) 474 ms
Total Warnings: 89
Total Errors: 0
No. of SeqIDs Defined: 90
Actual SeqID Count: 90

Error code	Error Description
W 402	Undefined organism found in <213> in SEQ ID (1)
W 402	Undefined organism found in <213> in SEQ ID (2)
W 402	Undefined organism found in <213> in SEQ ID (3)
W 402	Undefined organism found in <213> in SEQ ID (4)
W 402	Undefined organism found in <213> in SEQ ID (5)
W 402	Undefined organism found in <213> in SEQ ID (6)
W 402	Undefined organism found in <213> in SEQ ID (7)
W 402	Undefined organism found in <213> in SEQ ID (8)
W 402	Undefined organism found in <213> in SEQ ID (10)
W 402	Undefined organism found in <213> in SEQ ID (11)
W 402	Undefined organism found in <213> in SEQ ID (12)
W 402	Undefined organism found in <213> in SEQ ID (13)
W 402	Undefined organism found in <213> in SEQ ID (14)
W 402	Undefined organism found in <213> in SEQ ID (15)
W 402	Undefined organism found in <213> in SEQ ID (16)
W 402	Undefined organism found in <213> in SEQ ID (17)
W 402	Undefined organism found in <213> in SEQ ID (18)
W 402	Undefined organism found in <213> in SEQ ID (19)
W 402	Undefined organism found in <213> in SEQ ID (20)
W 402	Undefined organism found in <213> in SEQ ID (21)

Input Set:

Output Set:

Started: 2008-06-26 15:18:50.834
Finished: 2008-06-26 15:18:58.308
Elapsed: 0 hr(s) 0 min(s) 7 sec(s) 474 ms
Total Warnings: 89
Total Errors: 0
No. of SeqIDs Defined: 90
Actual SeqID Count: 90

Error code Error Description

This error has occurred more than 20 times, will not be displayed

SEQUENCE LISTING

<110> Chiron Corporation
Grandi, Guido
Ratti, Giulio

<120> Immunogenic Compositions for Chlamydia Pneumoniae

<130> 002441.00124 (PP21431.004)

<140> 10591395
<141> 2008-06-26

<150> PCT/US 05/06588

<151> 2005-03-02

<160> 90

<170> PatentIn version 3.2

<210> 1
<211> 928
<212> PRT
<213> Chlamydia pneumonia

<400> 1

Met Lys Ser Gln Phe Ser Trp Leu Val Leu Ser Ser Thr Leu Ala Cys
1 5 10 15

Phe Thr Ser Cys Ser Thr Val Phe Ala Ala Thr Ala Glu Asn Ile Gly
20 25 30

Pro Ser Asp Ser Phe Asp Gly Ser Thr Asn Thr Gly Thr Tyr Thr Pro
35 40 45

Lys Asn Thr Thr Gly Ile Asp Tyr Thr Leu Thr Gly Asp Ile Thr
50 55 60

Leu Gln Asn Leu Gly Asp Ser Ala Ala Leu Thr Lys Gly Cys Phe Ser
65 70 75 80

Asp Thr Thr Glu Ser Leu Ser Phe Ala Gly Lys Gly Tyr Ser Leu Ser
85 90 95

Phe Leu Asn Ile Lys Ser Ser Ala Glu Gly Ala Ala Leu Ser Val Thr
100 105 110

Thr Asp Lys Asn Leu Ser Leu Thr Gly Phe Ser Ser Leu Thr Phe Leu
115 120 125

Ala Ala Pro Ser Ser Val Ile Thr Thr Pro Ser Gly Lys Gly Ala Val
130 135 140

Lys Cys Gly Gly Asp Leu Thr Phe Asp Asn Asn Gly Thr Ile Leu Phe
145 150 155 160

Lys Gln Asp Tyr Cys Glu Glu Asn Gly Gly Ala Ile Ser Thr Lys Asn
165 170 175

Leu Ser Leu Lys Asn Ser Thr Gly Ser Ile Ser Phe Glu Gly Asn Lys
180 185 190

Ser Ser Ala Thr Gly Lys Gly Gly Ala Ile Cys Ala Thr Gly Thr
195 200 205

Val Asp Ile Thr Asn Asn Thr Ala Pro Thr Leu Phe Ser Asn Asn Ile
210 215 220

Ala Glu Ala Ala Gly Gly Ala Ile Asn Ser Thr Gly Asn Cys Thr Ile
225 230 235 240

Thr Gly Asn Thr Ser Leu Val Phe Ser Glu Asn Ser Val Thr Ala Thr
245 250 255

Ala Gly Asn Gly Gly Ala Leu Ser Gly Asp Ala Asp Val Thr Ile Ser
260 265 270

Gly Asn Gln Ser Val Thr Phe Ser Gly Asn Gln Ala Val Ala Asn Gly
275 280 285

Gly Ala Ile Tyr Ala Lys Lys Leu Thr Leu Ala Ser Gly Gly Gly
290 295 300

Gly Ile Ser Phe Ser Asn Asn Ile Val Gln Gly Thr Thr Ala Gly Asn
305 310 315 320

Gly Gly Ala Ile Ser Ile Leu Ala Ala Gly Glu Cys Ser Leu Ser Ala
325 330 335

Glu Ala Gly Asp Ile Thr Phe Asn Gly Asn Ala Ile Val Ala Thr Thr
340 345 350

Pro Gln Thr Thr Lys Arg Asn Ser Ile Asp Ile Gly Ser Thr Ala Lys
355 360 365

Ile Thr Asn Leu Arg Ala Ile Ser Gly His Ser Ile Phe Phe Tyr Asp
370 375 380

Pro Ile Thr Ala Asn Thr Ala Ala Asp Ser Thr Asp Thr Leu Asn Leu
385 390 395 400

Asn Lys Ala Asp Ala Gly Asn Ser Thr Asp Tyr Ser Gly Ser Ile Val
405 410 415

Phe Ser Gly Glu Lys Leu Ser Glu Asp Glu Ala Lys Val Ala Asp Asn
420 425 430

Leu Thr Ser Thr Leu Lys Gln Pro Val Thr Leu Thr Ala Gly Asn Leu
435 440 445

Val Leu Lys Arg Gly Val Thr Leu Asp Thr Lys Gly Phe Thr Gln Thr
450 455 460

Ala Gly Ser Ser Val Ile Met Asp Ala Gly Thr Thr Leu Lys Ala Ser
465 470 475 480

Thr Glu Glu Val Thr Leu Thr Gly Leu Ser Ile Pro Val Asp Ser Leu
485 490 495

Gly Glu Gly Lys Lys Val Val Ile Ala Ala Ser Ala Ala Ser Lys Asn
500 505 510

Val Ala Leu Ser Gly Pro Ile Leu Leu Asp Asn Gln Gly Asn Ala
515 520 525

Tyr Glu Asn His Asp Leu Gly Lys Thr Gln Asp Phe Ser Phe Val Gln
530 535 540

Leu Ser Ala Leu Gly Thr Ala Thr Thr Asp Val Pro Ala Val Pro
545 550 555 560

Thr Val Ala Thr Pro Thr His Tyr Gly Tyr Gln Gly Thr Trp Gly Met
565 570 575

Thr Trp Val Asp Asp Thr Ala Ser Thr Pro Lys Thr Lys Thr Ala Thr
580 585 590

Leu Ala Trp Thr Asn Thr Gly Tyr Leu Pro Asn Pro Glu Arg Gln Gly
595 600 605

Pro Leu Val Pro Asn Ser Leu Trp Gly Ser Phe Ser Asp Ile Gln Ala
610 615 620

Ile Gln Gly Val Ile Glu Arg Ser Ala Leu Thr Leu Cys Ser Asp Arg
625 630 635 640

Gly Phe Trp Ala Ala Gly Val Ala Asn Phe Leu Asp Lys Asp Lys Lys
645 650 655

Gly Glu Lys Arg Lys Tyr Arg His Lys Ser Gly Gly Tyr Ala Ile Gly
660 665 670

Gly Ala Ala Gln Thr Cys Ser Glu Asn Leu Ile Ser Phe Ala Phe Cys
675 680 685

Gln Leu Phe Gly Ser Asp Lys Asp Phe Leu Val Ala Lys Asn His Thr
690 695 700

Asp Thr Tyr Ala Gly Ala Phe Tyr Ile Gln His Ile Thr Glu Cys Ser
705 710 715 720

Gly Phe Ile Gly Cys Leu Leu Asp Lys Leu Pro Gly Ser Trp Ser His
725 730 735

Lys Pro Leu Val Leu Glu Gly Gln Leu Ala Tyr Ser His Val Ser Asn
740 745 750

Asp Leu Lys Thr Lys Tyr Thr Ala Tyr Pro Glu Val Lys Gly Ser Trp
755 760 765

Gly Asn Asn Ala Phe Asn Met Met Leu Gly Ala Ser Ser His Ser Tyr
770 775 780

Pro Glu Tyr Leu His Cys Phe Asp Thr Tyr Ala Pro Tyr Ile Lys Leu
785 790 795 800

Asn Leu Thr Tyr Ile Arg Gln Asp Ser Phe Ser Glu Lys Gly Thr Glu

805 810 815

Gly Arg Ser Phe Asp Asp Ser Asn Leu Phe Asn Leu Ser Leu Pro Ile
820 825 830

Gly Val Lys Phe Glu Lys Phe Ser Asp Cys Asn Asp Phe Ser Tyr Asp
835 840 845

Leu Thr Leu Ser Tyr Val Pro Asp Leu Ile Arg Asn Asp Pro Lys Cys
850 855 860

Thr Thr Ala Leu Val Ile Ser Gly Ala Ser Trp Glu Thr Tyr Ala Asn
865 870 875 880

Asn Leu Ala Arg Gln Ala Leu Gln Val Arg Ala Gly Ser His Tyr Ala
885 890 895

Phe Ser Pro Met Phe Glu Val Leu Gly Gln Phe Val Phe Glu Val Arg
900 905 910

Gly Ser Ser Arg Ile Tyr Asn Val Asp Leu Gly Gly Lys Phe Gln Phe
915 920 925

<210> 2

<211> 841

<212> PRT

<213> Chlamydia pneumonia

<400> 2

Met Lys Ile Pro Leu Arg Phe Leu Leu Ile Ser Leu Val Pro Thr Leu
1 5 10 15

Ser Met Ser Asn Leu Leu Gly Ala Ala Thr Thr Glu Glu Leu Ser Ala
20 25 30

Ser Asn Ser Phe Asp Gly Thr Thr Ser Thr Thr Ser Phe Ser Ser Lys
35 40 45

Thr Ser Ser Ala Thr Asp Gly Thr Asn Tyr Val Phe Lys Asp Ser Val
50 55 60

Val Ile Glu Asn Val Pro Lys Thr Gly Glu Thr Gln Ser Thr Ser Cys
65 70 75 80

Phe Lys Asn Asp Ala Ala Ala Gly Asp Leu Asn Phe Leu Gly Gly Gly
85 90 95

Phe Ser Phe Thr Phe Ser Asn Ile Asp Ala Thr Thr Ala Ser Gly Ala
100 105 110

Ala Ile Gly Ser Glu Ala Ala Asn Lys Thr Val Thr Leu Ser Gly Phe
115 120 125

Ser Ala Leu Ser Phe Leu Lys Ser Pro Ala Ser Thr Val Thr Asn Gly
130 135 140

Leu Gly Ala Ile Asn Val Lys Gly Asn Leu Ser Leu Leu Asp Asn Asp
145 150 155 160

Lys Val Leu Ile Gln Asp Asn Phe Ser Thr Gly Asp Gly Gly Ala Ile
165 170 175

Asn Cys Ala Gly Ser Leu Lys Ile Ala Asn Asn Lys Ser Leu Ser Phe
180 185 190

Ile Gly Asn Ser Ser Ser Thr Arg Gly Gly Ala Ile His Thr Lys Asn
195 200 205

Leu Thr Leu Ser Ser Gly Gly Glu Thr Leu Phe Gln Gly Asn Thr Ala
210 215 220

Pro Thr Ala Ala Gly Lys Gly Gly Ala Ile Ala Ile Ala Asp Ser Gly
225 230 235 240

Thr Leu Ser Ile Ser Gly Asp Ser Gly Asp Ile Ile Phe Glu Gly Asn
245 250 255

Thr Ile Gly Ala Thr Gly Thr Val Ser His Ser Ala Ile Asp Leu Gly
260 265 270

Thr Ser Ala Lys Ile Thr Ala Leu Arg Ala Ala Gln Gly His Thr Ile
275 280 285

Tyr Phe Tyr Asp Pro Ile Thr Val Thr Gly Ser Thr Ser Val Ala Asp
290 295 300

Ala Leu Asn Ile Asn Ser Pro Asp Thr Gly Asp Asn Lys Glu Tyr Thr
305 310 315 320

Gly Thr Ile Val Phe Ser Gly Glu Lys Leu Thr Glu Ala Glu Ala Lys
325 330 335

Asp Glu Lys Asn Arg Thr Ser Lys Leu Leu Gln Asn Val Ala Phe Lys
340 345 350

Asn Gly Thr Val Val Leu Lys Gly Asp Val Val Leu Ser Ala Asn Gly
355 360 365

Phe Ser Gln Asp Ala Asn Ser Lys Leu Ile Met Asp Leu Gly Thr Ser
370 375 380

Leu Val Ala Asn Thr Glu Ser Ile Glu Leu Thr Asn Leu Glu Ile Asn
385 390 395 400

Ile Asp Ser Leu Arg Asn Gly Lys Ile Lys Leu Ser Ala Ala Thr
405 410 415

Ala Gln Lys Asp Ile Arg Ile Asp Arg Pro Val Val Leu Ala Ile Ser
420 425 430

Asp Glu Ser Phe Tyr Gln Asn Gly Phe Leu Asn Glu Asp His Ser Tyr
435 440 445

Asp Gly Ile Leu Glu Leu Asp Ala Gly Lys Asp Ile Val Ile Ser Ala
450 455 460

Asp Ser Arg Ser Ile Asp Ala Val Gln Ser Pro Tyr Gly Tyr Gln Gly
465 470 475 480

Lys Trp Thr Ile Asn Trp Ser Thr Asp Asp Lys Lys Ala Thr Val Ser
485 490 495

Trp Ala Lys Gln Ser Phe Asn Pro Thr Ala Glu Gln Glu Ala Pro Leu
500 505 510

Val Pro Asn Leu Leu Trp Gly Ser Phe Ile Asp Val Arg Ser Phe Gln
515 520 525

Asn Phe Ile Glu Leu Gly Thr Glu Gly Ala Pro Tyr Glu Lys Arg Phe

530	535	540
Trp Val Ala Gly Ile Ser Asn Val Leu His Arg Ser Gly Arg Glu Asn		
545	550	555
Gln Arg Lys Phe Arg His Val Ser Gly Gly Ala Val Val Gly Ala Ser		
565	570	575
Thr Arg Met Pro Gly Gly Asp Thr Leu Ser Leu Gly Phe Ala Gln Leu		
580	585	590
Phe Ala Arg Asp Lys Asp Tyr Phe Met Asn Thr Asn Phe Ala Lys Thr		
595	600	605
Tyr Ala Gly Ser Leu Arg Leu Gln His Asp Ala Ser Leu Tyr Ser Val		
610	615	620
Val Ser Ile Leu Leu Gly Glu Gly Gly Leu Arg Glu Ile Leu Leu Pro		
625	630	635
640		
Tyr Val Ser Lys Thr Leu Pro Cys Ser Phe Tyr Gly Gln Leu Ser Tyr		
645	650	655
Gly His Thr Asp His Arg Met Lys Thr Glu Ser Leu Pro Pro Pro Pro		
660	665	670
Pro Thr Leu Ser Thr Asp His Thr Ser Trp Gly Gly Tyr Val Trp Ala		
675	680	685
Gly Glu Leu Gly Thr Arg Val Ala Val Glu Asn Thr Ser Gly Arg Gly		
690	695	700
Phe Phe Gln Glu Tyr Thr Pro Phe Val Lys Val Gln Ala Val Tyr Ala		
705	710	715
720		
Arg Gln Asp Ser Phe Val Glu Leu Gly Ala Ile Ser Arg Asp Phe Ser		
725	730	735
Asp Ser His Leu Tyr Asn Leu Ala Ile Pro Leu Gly Ile Lys Leu Glu		
740	745	750
Lys Arg Phe Ala Glu Gln Tyr Tyr His Val Val Ala Met Tyr Ser Pro		
755	760	765

Asp Val Cys Arg Ser Asn Pro Lys Cys Thr Thr Thr Leu Leu Ser Asn
770 775 780

Gln Gly Ser Trp Lys Thr Lys Gly Ser Asn Leu Ala Arg Gln Ala Gly
785 790 795 800

Ile Val Gln Ala Ser Gly Phe Arg Ser Leu Gly Ala Ala Ala Glu Leu
805 810 815

Phe Gly Asn Phe Gly Phe Glu Trp Arg Gly Ser Ser Arg Ser Tyr Asn
820 825 830

Val Asp Ala Gly Ser Lys Ile Lys Phe
835 840

<210> 3
<211> 428
<212> PRT
<213> Chlamydia pneumonia

<400> 3

Met Phe Glu Ala Val Ile Ala Asp Ile Gln Ala Arg Glu Ile Leu Asp
1 5 10 15

Ser Arg Gly Tyr Pro Thr Leu His Val Lys Val Thr Thr Ser Thr Gly
20 25 30

Ser Val Gly Glu Ala Arg Val Pro Ser Gly Ala Ser Thr Gly Lys Lys
35 40 45

Glu Ala Leu Glu Phe Arg Asp Thr Asp Ser Pro Arg Tyr Gln Gly Lys
50 55 60

Gly Val Leu Gln Ala Val Lys Asn Val Lys Glu Ile Leu Phe Pro Leu
65 70 75 80

Val Lys Gly Cys Ser Val Tyr Glu Gln Ser Leu Ile Asp Ser Leu Met
85 90 95

Met Asp Ser Asp Gly Ser Pro Asn Lys Glu Thr Leu Gly Ala Asn Ala
100 105 110

Ile Leu Gly Val Ser Leu Ala Thr Ala His Ala Ala Ala Thr Leu
115 120 125

Arg Arg Pro Leu Tyr Arg Tyr Leu Gly Gly Cys Phe Ala Cys Ser Leu
130 135 140

Pro Cys Pro Met Met Asn Leu Ile Asn Gly Gly Met His Ala Asp Asn
145 150 155 160

Gly Leu Glu Phe Gln Glu Phe Met Ile Arg Pro Ile Gly Ala Ser Ser
165 170 175

Ile Lys Glu Ala Val Asn Met Gly Ala Asp Val Phe His Thr Leu Lys
180 185 190

Lys Leu Leu His Glu Arg Gly Leu Ser Thr Gly Val Gly Asp Glu Gly
195 200 205

Gly Phe Ala Pro Asn Leu Ala Ser Asn Glu Glu Ala Leu Glu Leu Leu
210 215 220

Leu Leu Ala Ile Glu Lys Ala Gly Phe Thr Pro Gly Lys Asp Ile Ser
225 230 235 240

Leu Ala Leu Asp Cys Ala Ala Ser Ser Phe Tyr Asn Val Lys Thr Gly
245